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Mineral Industry Surveys

For information, contact:
M. Michael Miller, Fluorspar Commodity Specialist
U.S. Geological Survey
983 National Center
Reston, VA 20192
Telephone: (703) 648-7716, Fax: (703) 648-7757
E-mail: mmiller1@usgs.gov

Barbara McNair (Data)
Telephone: (703) 648-7952
Fax: (703) 648-7975
E-mail: bmcnair@usgs.gov

Internet: http://minerals.usgs.gov/minerals

FLUORSPAR IN THE FOURTH QUARTER 2005

Reported fluorspar consumption in the fourth quarter was 119,000 metric tons (t), about an 18% decrease compared with the previous quarter and an 11% decrease compared with the figure for the fourth quarter of 2004. Consumption of fluorspar for hydrofluoric acid (HF) and aluminum fluoride was 106,000 t, a 16% decrease compared with the previous quarter and about 4% lower compared with the fourth quarter of 2004. Imports of fluorspar were 120,000 t, a decrease of about 22% compared with the previous quarter, and 7% less than in the fourth quarter of 2004.

Some of the c.i.f. values reported by the U.S. Census Bureau for acid-grade fluorspar imports were missing freight costs, which required revisions in tables 1 and 3. For the specific shipments that were missing freight costs, adjustments were made by incorporating estimated freight costs derived from industry sources. These adjustments resulted in significant increases in the quarterly average values per ton of acid-grade imports.

End-of-the-year totals for 2005 revealed that reported fluorspar consumption decreased by 36,000 t or 6% compared with revised totals for 2004. This decrease was spread across all three general market categories shown in table 2. Fluorspar imports increased by 5% and imports of HF increased by 7%, compared with those of the previous year.

Defense Stockpile

At the end of 2005, the Defense National Stockpile Center (DNSC) reported that unsold stockpile material consisted of about 33,600 short dry tons (SDT) (about 30,500 t) of metallurgical grade and about 5,240 SDT (about 4,750 t) of acid grade. Material committed for sale pending shipment totaled about 53,400 SDT (about 48,400 t) of metallurgical grade and 1,550 SDT (1,410 t) of acid grade.

In recent sales held in January and February 2006, the DNSC announced the award of 833 SDT of acid-grade fluorspar to Solvay Fluor Mexico S.A. de C.V. for $130 per short dry ton, 803 SDT to Oxbow Carbon & Minerals LLC for $145 per ton, 600 SDT of acid grade to Seaforth Mineral & Ore Co. for $132 per ton, and 400 SDT to Hastie Mining and Trucking Co. for $136 per ton (Ringquist, 2006a, b).

Industry News

South African fluorspar producer Sallies Ltd., owner of the Witkop Fluorspar Mine located near Zeerust in North West Province, announced that it had entered into an agreement (subject to a due diligence review) to purchase Intercoal (Pty.) Ltd. and its wholly owned subsidiary Buffalo Fluorspar. The Buffalo Fluorspar operation is located in northern South Africa near Naboomspruit in Limpopo Province. Sallies is raising R47 million by a rights offer to fund the acquisition, paydown existing debt, and to finance the expansion of existing operations (Business Day, 2006b§[1]). The Buffalo Fluorspar Mine ceased production in 1994, but recycling operations resumed in 2000 under different owners. There has been, however, little or no reported output since 2001. A flotation mill was overhauled and recommissioned in 2000, and the property reportedly still contained large undeveloped reserves of low-grade fluorspar when the mine shutdown.

In separate developments involving Sallies, the company announced that it had canceled its supply contract with Honeywell International Inc. as a result of a dispute over payments. The 5-year contract, which would have expired at the end of 2006, capped the price Honeywell paid at $116 per metric ton (excluding insurance and freight costs). In the past, Honeywell had consumed as much as 60% of Sallies' annual production. Almost all of Sallies' fluorspar is exported in dollar-denominated prices, which with the significant appreciation of the rand against the dollar in recent years, made the contract unprofitable to Sallies. In November 2005, after obtaining legal advice, Sallies canceled the contract (Business Day, 2006a§).

It was also announced that Sallies is to sell 30% of the company to black economic empowerment group African Renaissance Investments (Pty.) Ltd. in order to comply with black empowerment laws and codes passed in recent years. The two parties have also entered into a joint-venture agreement (70% Sallies and 30% Renaissance), which will include an agreement wherein Sallies will manage and operate the business

[1]References that include a section mark (§) are found in the Internet References Cited section.

while assisting in the transfer of skills to historically disadvantaged South Africans (ShareData Online, 2006§).

Fluorochemical News

Honeywell International announced that it was increasing prices of HF by at least 20%, depending on the grade, effective November 8, 2005. The company cited increasing raw material and transportation costs as the reasons (Chemical Week, 2005b).

Asahi Glass Co., Ltd., reported that it plans to construct an ethylene tetrafluoroethylene (ETFE) copolymer unit at its Thorton Cleveleys site in the United Kingdom. The new plant will be built adjacent to the polytetrafluoroethylene plant Asahi acquired in 1999 as part of the acquisition of the fluorinated resins business of Imperial Chemical Industries PLC. The construction is scheduled for completion in January 2007. ETFE is used as electrical wire insulation and in linings and tubing for pumping chemicals (Chemical Week, 2005a).

The U.S. Environmental Protection Agency (EPA) asked a group of eight international chemical companies to eliminate perfluorooctanoic acid (PFOA) and other fluorinated compounds from their products and facility emissions by 2015. The voluntary effort is aimed at PFOA, its longer chain homologues, and compounds that can degrade into PFOA. The compound is suspected of causing health problems, and the EPA is planning to add PFOA to the Toxics Release Inventory. PFOA is used as a processing aid in the manufacture of fluoropolymers and also may form from the breakdown of fluorinated alcohols used to impart stain- and grease-resistance to fabrics and paper (Chemical and Engineering News, 2006).

References Cited

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TABLE 1
SALIENT FLUORSPAR STATISTICS[1]

(Metric tons, unless otherwise specified)

	2004	2005				
	Fourth quarter	First quarter	Second quarter	Third quarter	Fourth quarter	Year to date
Imports for consumption:	129,000	227,000	129,000	153,000	120,000	629,000
Average value per ton, c.i.f U.S. port, acid grade	$155	$195 r	$201 r	$208 r	$210	$202
Average value per ton, c.i.f. U.S. port, metallurgical	$83	$91	$95	$92	$94	$93
Exports	4,050	5,480	6,060	20,100	4,430	36,100
End of quarter stocks, consumer	75,200	130,000	95,300	109,000	80,800	XX
Fluorspar equivalent of imported hydrofluoric acid	52,200	53,600	50,700	48,400	53,100	206,000
Fluorspar equivalent of imported cryolite	943	1,100	1,110	809	707	3,730
Quarterly reported fluorspar consumption	134,000	160,000	157,000	145,000	119,000	582,000

[r]Revised. XX Not applicable.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2

CONSUMPTION OF FLUORSPAR BY END USE AND ASSAY RANGE[1]

(DOMESTIC AND FOREIGN IN THE UNITED STATES)

(Metric tons)

End use or product	First quarter 2004			Second quarter 2004		
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total
Hydrofluoric acid and aluminum fluoride	140,000	--	140,000	150,000	--	150,000
Metallurgical	4,150	9,850	14,000	4,890	9,280	14,200
Other uses or products[2]	6,600	--	6,600	7,280	--	7,280
Total	151,000	9,850	161,000	162,000	9,280	171,000
Stocks, end of quarter[3]	147,000	26,600	173,000	76,300	25,900	102,000

End use or product	Third quarter 2004			Fourth quarter 2004			
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	2004 Year to date
Hydrofluoric acid and aluminum fluoride	132,000	--	132,000	110,000	--	110,000	532,000
Metallurgical	4,670	8,340	13,000	6,670	11,900	18,600	59,700
Other uses or products[2]	7,510	--	7,510	4,990	--	4,990	26,400
Total	144,000	8,340	152,000	122,000	11,900	134,000	618,000
Stocks, end of quarter[3]	72,100	21,300	93,400	59,500	15,700	75,200	75,200

End use or product	First quarter 2005			Second quarter 2005		
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total
Hydrofluoric acid and aluminum fluoride	139,000	--	139,000	136,000	--	136,000
Metallurgical	6,710	8,700	15,400	4,240	10,100	14,300
Other uses or products[2]	5,140	--	5,140	7,250	--	7,250
Total	151,000	8,700	160,000	147,000	10,100	157,000
Stocks, end of quarter[3]	116,000	13,700	130,000	87,300	8,010	95,300

End use or product	Third quarter 2005			Fourth quarter 2005			
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	2005 Year to date
Hydrofluoric acid and aluminum fluoride	127,000	--	127,000	106,000	--	106,000	508,000
Metallurgical	4,290	6,940	11,200	4,350	3,310	7,660	48,600
Other uses or products[2]	7,200	--	7,200	5,310	--	5,310	24,900
Total	138,000	6,940	145,000	116,000	3,310	119,000	582,000
Stocks, end of quarter[3]	98,000	10,800	109,000	69,600	11,200	80,800	80,800

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes acid grade used in enamel, glass and fiberglass, steel castings, and welding rod coatings.

[3]Stocks include distributor stocks (excluding National Defense Stockpile holdings) and consumer stocks for hydrofluoric acid and aluminum fluoride.

TABLE 3

U.S. IMPORTS FOR CONSUMPTION OF FLUORSPAR, BY COUNTRY AND VALUE[1,2]

	2004		2005									
	Fourth quarter		First quarter		Second quarter		Third quarter		Fourth quarter		Total	
	Quantity (metric tons)	Value[3] (thousands)	Quantity (metric tons)	Value[3] (thousands)	Quantity (metric tons)	Value[3] (thousands)	Quantity (metric tons)	Value[3] (thousands)	Quantity (metric tons)	Value[3] (thousands)	Quantity (metric tons)	Value[3] (thousands)
Containing more than 97% calcium fluoride:												
China	31,800	$5,380	168,000	$34,300 r	89,700	$18,700 r	97,400	$21,800 r	64,800	$14,300	420,000	$89,200
France	22	8	39	21	--	--	--	--	--	--	39	21
Germany	--	--	19	9	--	--	--	--	--	--	19	9
Mexico	18,100	2,960	12,200	1,790	10,400	1,780	13,700	2,420	10,200	1,800	46,500	7,790
Mongolia	24,900	3,910	10,100	1,650	8,860	1,490	10,100	1,550	13,500	2,550	42,600	7,250
South Africa	32,100	4,380	24,600	3,980	9,870	1,860	22,400	4,050	20,200	4,200	77,000	14,100
United Kingdom	507	60	--	--	--	--	1	3	148	23	149	26
Total	108,000	16,700	215,000	41,800 r	119,000	23,900 r	144,000	29,800 r	109,000	22,900	586,000	118,000
Containing not more than 97% calcium fluoride:												
Canada	6	2	34	12	41	17	--	--	--	--	75	29
Mexico	21,700	1,800	12,400	1,110	10,600	1,000	9,020	828	11,400	1,070	43,400	4,020
Other	--	--	--	--	--	--	--	--	--	--	--	--
Total	21,700	1,800	12,400	1,130	10,700	1,020	9,020	828	11,400	1,070	43,500	4,050
Grand total	129,000	18,500	227,000	42,900 r	129,000	24,900 r	153,000	30,700 r	120,000	24,000	629,000	122,000

rRevised. -- Zero.

[1]Imports for consumption include imports of immediate entry, and warehouse withdrawals.

[2]Data are rounded to no more than three significant digits; may not add to totals shown.

[3]Cost, insurance, and freight at U.S. ports.

Source: U.S. Census Bureau.

TABLE 4

IMPORTS FOR CONSUMPTION OF HYDROFLUORIC ACID[1]

	2004		2005									
	Fourth quarter		First quarter		Second quarter		Third quarter		Fourth quarter		Total	
	Quantity (metric tons)	Value[2] (thousands)	Quantity (metric tons)	Value[2] (thousands)	Quantity (metric tons)	Value[2] (thousands)	Quantity (metric tons)	Value[2] (thousands)	Quantity (metric tons)	Value[2] (thousands)	Quantity (metric tons)	Value[2] (thousands)
Canada	10,700	$11,000	11,100	$11,900	9,750	$10,500	12,100	$12,600	11,200	$11,100	44,100	$46,100
China	59	55	234	169	270	177	257	161	134	92	895	599
Germany	91	193	61	168	77	165	105	223	112	149	355	705
Japan	391	961	333	822	293	720	227	543	442	1,010	1,300	3,100
Mexico	23,400	22,600	23,700	22,600	23,300	22,300	19,500	18,500	23,300	23,300	89,900	86,700
Other[3]	128	314	287	298	122	283	80	246	151	355	640	1,180
Total	34,800	35,100	35,700	36,000	33,800	34,200	32,300	32,300	35,400	36,000	137,000	138,000

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Cost, insurance, and freight at U.S. ports.

[3]Includes India, Italy, the Republic of Korea, the Netherlands, Singapore, Switzerland, and Taiwan.

Source: U.S. Census Bureau.